

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS P. PALMER and
ANTHONY J. CONNER

Appeal No. 93-4108
Application 07/552,880¹

ON BRIEF

Before WILLIAM F. SMITH, JOHN D. SMITH, and GRON, Administrative Patent Judges.

WILLIAM F. SMITH, Administrative Patent Judge.

¹ Application for patent filed July 16, 1990. According to appellants, the application is a continuation-in-part of Application 07/222,616, filed July 21, 1988, now abandoned.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 19 through 45, all the claims remaining in the application.

Claims 19, 24, and 43 are illustrative of the subject matter on appeal and read as follows:

19. A method of forming a substantially pure F₁ hybrid population of plants, said method including:

(a) planting plots of parent plants in which alternating plots contain plants which are used as the male and female parent plants respectively;

(b) allowing natural fertilization of said plants to occur;

(c) harvesting fertilised seed from said plots of plants used as the female parent plant only; and

(d) dosing fertilised seed harvested in step (c) with the phytotoxic chemical; wherein the parent plants used as male parent plants are resistant to a phytotoxic chemical, said resistance being attributable solely to a homozygous dominant nuclear marker gene, said resistant gene being absent from said parent plants used as female parent plants.

24. A method as claimed in claim 19 wherein step (d) is carried out after the emergence of seedlings from said seed.

43. A method of testing the purity of F₁ hybrid populations of plants said method including:

(a) planting plots of parent plants in which alternating plots contain plants used as the male and female parent plants respectively;

(b) allowing natural fertilization of the plants to occur;

(c) harvesting fertilized seed from said plots of plants used as the female parent plant only;

(d) planting a small quantity as a sample of the seeds [sic]

(e) dosing the seedlings after emergence with a phytotoxic chemical, wherein the parent plants used as male parent plants are resistant to said phytotoxic chemical, wherein the parent plants used as male parent plants are resistant to said phytotoxic chemical, said resistance being attributable solely to a homozygous dominant nuclear marker gene being absent from the parent plants used as female parent plants; and

(f) determining the percentage of seedlings resistant to the phytotoxic chemical.

The references relied upon by the examiner are:

Berversdorf et al. (Berversdorf '763)	4,517,763	May 21, 1985
Berversdorf et al. (Berversdorf '084)	4,658,084	Apr. 14, 1987

Vasil, "Progress in the Regeneration and Genetic Manipulation of Cereal Crops," Bio/Technology, vol. 6, pp. 397-402 (1988)

The claims stand rejected as follows:

- I. Claims 19 through 42 under 35 U.S.C. § 112, first and second paragraphs;
- II. Claims 19 through 45 under 35 U.S.C. § 112, first paragraph; and
- III. Claims 19 through 45 under 35 U.S.C. § 103 as unpatentable Berversdorf '084 in view of Berversdorf '763.

We reverse and make a new ground of rejection under 37 CFR § 1.196(b).

Rejection I

The examiner is concerned whether one skilled in the art could determine the metes and bounds of the phrase “substantially pure F₁ hybrid population of plants” as used in claims 19 through 42. In setting forth the rejection at page 3 of the Examiner’s Answer, the examiner notes “the absence of a recitation in the specification of the meaning of the terms [sic] ‘substantially’ when employed in the claimed context.” Appellants argue in the paragraph bridging pages 7-8 of the Appeal Brief that the questioned phrase means “something in the 90-99% range and as such is commonly accepted in the trade.”

Both the examiner and appellants appear to be operating under the belief that one must be able to convert the word “substantially” to a finite numerical range before the use of that word in a patent claim can be considered proper. This is incorrect. As set forth in In re Mattison, 509 F.2d 563, 565, 184 USPQ 484, 486 (CCPA 1975), knowledge of a precise numerical range encompassed by a claim requirement which includes the word “substantially” is not needed in order to comply with 35 U.S.C. § 112, second paragraph. Thus, while we expressly disagree with appellants that this claim requirement means “something in the 90-99% range,” absent a more fact based explanation from the examiner, we do not find that the examiner has established in the first instance that one skilled in the art would be unable to reasonably understand the metes and bounds of these claims.

Rejection I is reversed.

Rejection II

The examiner has required appellants to limit the claims to the dicots as exemplified by kanamycin resistance in Nicotiana plumbaginifolia. In support of this requirement, the examiner relies upon Vasil for its disclosure in the right hand column of page 400 that grasses possess high natural resistance to kanamycin.

To the extent that Vasil provides evidence that at the time of the present invention persons skilled in this art understood that grasses possessed high natural resistance to kanamycin, this fact would only help in establishing the enablement of the claims on appeal rather than their non-enablement. In essence, Vasil teaches that kanamycin would not be the first selection agent of choice in transforming grasses. Armed with this knowledge, persons skilled in this art would know to use other markers for selection

. The examiner has not established on this record that markers effective for grasses were unavailable. Indeed, the examiner's reliance upon the two Beversdorf patents belies such a finding.

Rejection II is reversed.

Rejection III

We have carefully considered the statement of this rejection as it appears on pages 4-6 of the Examiner's Answer. However, the examiner has not explained the factual basis of this rejection with the degree of specificity required for us to review the rejection. It is not apparent from the statement of the rejection why the subject matter of any individual claim would have been suggested from a consideration of the combined disclosures of Beversdorf '084 and Beversdorf '763.

For example, in regard to claims 19-26, the examiner states the following at page 5 of the Examiner's Answer:

Claims 19-26 of the instant application present the planting of separate male and female parents in which the male parent possess [sic] herbicide resistance and seed are [sic] selectively harvested only from the female plant. The hybrid seed and plants derived from the same are produced by the application of the selective herbicide to the seed. Thus, in terms of this embodiment, the prior art differs only in the use of separate plants [sic] blocks as a means of controlling the plants from which presumed hybrid seed are formed.

It is not clear what the examiner means in stating "the prior art differs only" Is the examiner relying upon Beversdorf '084 by itself in rejecting claims 19 through 26 or is a combination of the disclosures of Beversdorf '084 and Beversdorf '763 relied upon? If the latter is intended, the examiner has not explained in what manner the two disclosures are combined in order to arrive at the subject matter of any of claims 19 through 26. For

example, where does the prior art teach that “male parent plants are resistant to a phytotoxic chemical”?

As a further example of the lack of detail presented by the examiner in rejecting the claims on appeal, we point to claims 43 through 45. As a final step, these claims require the determination of the percentage of seedlings resistant to a phytotoxic chemical. The examiner’s consideration of claims 43 through 45 is set forth at page 6 of the Examiner’s Answer as follows:

Finally, regarding the limitations presented in claims 43-45, the application of the technique of herbicide selection to identify and determine the percentage of hybrid seed in a population through sub-sampling of hybrids produced as above is clearly evident from the prior art of record. No distinction is seen from the method of producing the hybrid seed via elimination of unwanted self or sib pollination presented in claims 19-42 and the additional step of determining the percentage of seed resistant to the herbicide.

From this statement, it appears that the examiner has ignored or read out of claims 42 through 45 the requirement of determining the percentage of seedlings resistant to a phytotoxic chemical. This is clear error. 35 U.S.C. § 103 requires that an obviousness determination be made on the basis of the subject matter of a claim as a whole. On this record, it is not clear on what basis the examiner has concluded that the subject matter of claims 43 through 45 would have been obvious to one of ordinary skill in the art.

Conclusions of obviousness must be based upon facts, not generalities. In re Freed, 425 F.2d 785, 788, 165 USPQ 570, 571 (CCPA 1970); In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). Absent a clear, fact-based statement from the examiner as to why the subject matter of each claim, considered as a whole, would have been obvious to one of ordinary skill in the art, we do not find that the examiner has properly discharged his initial burden of establishing a prima facie case of obviousness.

Rejection III is reversed.

New Ground of Rejection Under 37 CFR § 1.196(b)

Claims 19 through 42, 44, and 45 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims such as claim 19 are indefinite in stating in step (d) “dosing fertilised seed . . . with the phytotoxic chemical” (emphasis added) since the claims do not previously recite a phytotoxic chemical. Thus, the antecedent support for “the phytotoxic chemical” is not apparent. Compare claim 19 with claim 27 in which claim 27 (a) provides proper antecedent support for later named phytotoxic chemicals.

Claims 19 through 42 are also indefinite in stating that fertilized seed is to be dosed with a phytotoxic chemical. As seen from claim 24, appellants intend this step to include

dosing an emerged seedling with the phytotoxic chemical. It is not apparent that an emerged seedling would be considered a fertilized seed. While an emerged seedling could be considered the product of a fertilized seed, it would appear that fertilized seeds and emerged seedlings are two distinct states in a plant's life. Thus, claims such as claim 19 are ambiguous in requiring that a fertilized seed be dosed with a phytotoxic chemical.

Time Period for Response

This opinion contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

- (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the

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matter reconsidered by the examiner, in which event the application will be
remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the
Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may
be extended under 37 CFR § 1.136(a).

REVERSED - 37 CFR § 1.196(b)

William F. Smith)	
Administrative Patent Judge)	
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